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Cogs 104

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Assignment 12: Perceptron

clear

epochs=0;

Inputs=[1 0 0 0; 0 1 0 0; 0 0 1 0; 0 0 0 1];

Targets=[1 0; 1 0; 0 1; 0 1];

W=rand(4,2)\*2-1;

mse=9999;

Lrate=0.1;

while mse>0.05

epochs=epochs+1;

for n=1:4

In=Inputs(n,:);

Targ=Targets(n,:);

Out=In\*W;

Err=Targ-Out;

errs(n)=mean(Err.^2);

delta=Lrate.\*(In'\*Err)

W=W+delta;

end

mse=mean(errs)

allmses(epochs)=mse;

end

plot(allmses)

xlabel('epochs')

ylabel('mse')

